means for inhibiting further programming of correctly verified cells among the plurality of addressed cells, and

means for further programming and verifying in parallel the plurality of addressed cells and inhibiting programming of correctly verified cells until all the plurality of addressed cells are verified correctly.--

REMARKS

By this Second Preliminary Amendment, the initially filed method claims 63-72 are being amended to make the terminology more accurate by, in some cases, generalizing terms, and, in other cases, being more specific. New claims 73-81 being added by this Amendment are dependent upon this initial group of claims. New method claims 95-98 are directed to similar subject matter but in different scope. Corresponding system claims 82-94 and 99 are also being added with a somewhat different emphasis.

Each of the claims 63-99 now in this application are directed to programming a group of non-volatile memory cells by applying programming conditions to the cells in the group, monitoring their programmed states, and then terminating application of the programming conditions on a cell-by-cell basis as they reach their respective programmed states corresponding to data that is being stored in the memory. The programming conditions remain applied until all cells of the group have been verified to be properly programmed.

This claimed concept, namely inhibiting programming on a cell-by-cell basis until all the cells of an addressed group of cells have been programmed, is also included in claim 27 of patent no. 5,172,338 (hereinafter referenced as the "'338 patent"). This claim was asserted by SanDisk Corporation, assignee of the '338 patent and the present application, against Samsung Corporation and its products in the litigation identified in the Remarks to the first Preliminary Amendment filed with this application on December 20, 1996. The status of the identified District Court and International Trade Commission ("ITC") actions is that they have now been settled. Prior to the settlement, the ITC upheld the validity of the '338 patent claim 27, and the U.S. Patent and

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Trademark Office decided, in Reexaminations instituted by both SanDisk and Samsung, to confirm the patentability of claim 27.

The principal purpose of the present application is to define the cell-by-cell inhibition programming feature without all the other limitations included in claim 27 of the '338 patent that are not necessary to its patentability. The feature of inhibiting programming on a cell-by-cell basis until all cells in a group are programmed (also referenced as "termination") is patentable by itself.

Most of the claims additionally specify a multi-state memory. That is, each cell is programmable into one of more than two states. This results in more than one bit of data being stored in each memory cell.

A copy of the '338 patent is being filed with this Amendment for easy reference. The '338 patent is a continuation-in-part of application serial no. 07/337,579, filed April 13, 1989, the same day as the earliest parent in a chain of applications leading to the present application. It is the text of serial no. 07/337,579 that was incorporated by reference into the present line of applications, and which has now been added to the present application by the first Preliminary Amendment.

Also being filed with this Amendment are copies of the following documents:

(1) Pertinent portions of the public version of the ITC Administrative Law Judge ("ALJ") Initial Determination, dated March 25, 1997 (The Commission subsequently refused to review the ALJ's decision with regard to the '338 patent, and an exclusion order was issued against Samsung's products.);

(2) The USPTO Notice of Intent to Issue Reexamination Certificate, dated April 25, 1997, in the two reexaminations nos. 90/004,352 and 90/004,387 of the '338 patent; and

(3) The Reexamination Certificate B1 5,172,338.

The decisions of the ITC and USPTO, in proceedings where the validity of claim 27 of the '338 patent was vigorously attacked,
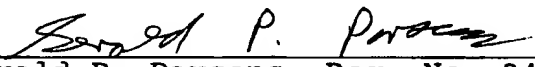
support the patentability of the claims currently in the present application.

An Information Disclosure Statement is being prepared for this application to include the references cited in the Reexaminations, the '338 patent and possibly will include other references. It is expected that this Statement, with copies of the references, will be filed within two weeks of the date of this Amendment.

An early examination and allowance of the present application is solicited. In the course of the examination, the Examiner is invited to telephone the undersigned attorney any time there are questions or any matters that can be more expeditiously handled by a telephone interview.

Dated: December 23, 1997   Respectfully submitted,

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